

AD-A086 198

NEW MEXICO UNIV ALBUQUERQUE COLL OF ENGINEERING F/6 5/9
SUMMER RESEARCH OF FACTORS INFLUENCING HIGH SCHOOL STUDENT'S CH--ETC(U)
MAY 79 R S SANCHEZ AFOSR-76-3090

UNCLASSIFIED

AFOSR-TR-79-0799

NL

AD
AD-8084



END

DATE

FILMED

8-80

DTIC

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFOSR-TR-79-0799	2. GOVT ACCESSION NO. AD-A086198	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) SUMMER RESEARCH OF FACTORS INFLUENCING HIGH SCHOOL STUDENT'S CHOICE OF CAREERS IN DEFENSE RELATED ENGINEERING		5. TYPE OF REPORT & PERIOD COVERED Final rep 1 Jun 77-30 May 78
7. AUTHOR(s) Richard S. Sanchez		6. PERFORMING ORG. REPORT NUMBER 75
9. PERFORMING ORGANIZATION NAME AND ADDRESS College of Engineering University of New Mexico Albuquerque, NM 87131		8. CONTRACT OR GRANT NUMBER(s) AFOSR-76-3090
11. CONTROLLING OFFICE NAME AND ADDRESS AFOSR/NP Bolling AFB, Bldg. #410 Wash DC 20332		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 61102F 16 2301/A5
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) LEVEL		12. REPORT DATE 11 May 79
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		13. NUMBER OF PAGES 27
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 12/29		15. SECURITY CLASS. (of this report) UNCLASSIFIED
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) For a second year in a row, the goal of increasing the supply of minorities, women, and other students in engineering was helped by the UNITE program. This program gave the University of New Mexico College of Engineering an opportunity to again work with high school counselors throughout the state of New Mexico, and El Paso, Texas to identify high school juniors that express an interest in engineering studies. A large number of counselors and students were also made aware of the opportunities in engineering. The UNITE '77 summer workshop was another successful endeavor from the viewpoint of the students, program staff.		

DD FORM 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

ADA 086198

DDC FILE COPY

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

guest lecturers and panelists, and several individuals from Kirtland Air Force Base Weapons Laboratory. The Weapons Lab personnel ~~again willingly~~ gave of their time to put on their excellent demonstrations, tours, and talks for the participants. The participants had nothing but high praise for the Laboratory personnel. The student's knowledge of the world of engineering was definitely increased, and the program staff learned what were the most beneficial activities for conducting an efficient program. The program staff worked closely with the participants at all times during the program.

Accession For	
NTIS GRA&I	
DDO TAB	
Unannounced	
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or special
A	

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

REPORT ON THE JOINT RESEARCH
FACTORS INFLUENCING HIGH SCHOOL
STUDENT'S CHOICE OF CAREER
DEFENSE RELATED ENGINEERING

ADSR-79-0499

REPORT ON THE
SUMMER RESEARCH OF FACTORS INFLUENCING HIGH SCHOOL
STUDENT'S CHOICE OF CAREERS IN DEFENSE RELATED
ENGINEERING

TITLE: Uninitiated Introduction To Engineering

UNITE

Funded by a grant from the Air Force Office
of Scientific Research

College of Engineering
The University of New Mexico
Albuquerque, New Mexico
87131

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH (AFSC)
NOTICE OF TRANSMITTAL TO DDC
This technical report has been reviewed and is
approved for public release IAW A.R. 190-12 (7b).
Distribution is unlimited.
A. D. BLOSE
Technical Information Officer

by: Richard S. Sanchez
UNITE Director

CONTENTS

INTRODUCTION	
PARTICIPANT INFORMATION	
PROGRAM ACTIVITIES	
SCHEDULE	
WEAPONS LABORATORY SCHEDULE	
PROGRAM EVALUATION	
BUDGET	
UNITE '76 FOLLOW UP	
APPENDIX A.....	

INTRODUCTION

The UNITE program at The University of New Mexico College of Engineering was conducted for the first time in the summer of 1976. The first program format proved to be so successful that it was retained for the 1977 program. Again the participants, program staff, guest lecturers, and panelists felt that the program was worthwhile and should be continued. There were difficulties in recruitment of participants for UNITE '77 because of the lateness in receipt of authoritative word that the program would be funded. Further comment on this matter will be made later in this report.

For a second year in a row, the goal of increasing the supply of minorities, women, and other students in engineering was helped by the UNITE program. This program gave The University of New Mexico College of Engineering an opportunity to again work with high school counselors throughout the state of New Mexico, and El Paso, Texas to identify high school juniors that express an interest in engineering studies. A large number of counselors and students were also made aware of the opportunities in engineering.

The UNITE '77 summer workshop was another successful endeavor from the viewpoint of the students, program staff, guest lecturers and panelists, and several individuals from Kirtland Air Force Base Weapons Laboratory. The Weapons Lab personnel again willingly gave of their time to put on their excellent demonstrations, tours, and talks for the participants. The participants had nothing but high praise for the Laboratory personnel.

The student's knowledge of the world of engineering was definitely increased, and the program staff learned what were the most beneficial activities for conducting an efficient program.

The program staff worked closely with the participants at all times during the program.

PARTICIPANT INFORMATION

The selection of students for UNITE '77 is shown below. The ethnic and male/female breakdown (Figure I) is shown first followed by a list of the participants (Figure II).

Figure I

ETHNIC AND MALE/FEMALE BREAKDOWN					
Ethnic	From Albuquerque		Outside of Albuquerque		TOTAL
	Male	Female	Male	Female	
Hispanic	9	2	10	11	32
American Indian	0	0	0	2	2
Black	0	0	0	0	0
Other	1	3	2	2	8
TOTALS	10	5	12	15	42

The participants were from throughout the state of New Mexico. The majority of the students (64%) were from outside of Albuquerque, with the rest (36%) coming from the nine city high schools.

The list of the participants together with their addresses, schools, and ethnic group follows as Figure II:

Applicant	Address	High school	Ethnic
Alaniz, Irene	410 East B Lordsburg, NM 88045	Lordsburg	Hispanic
Arguelles, Partick	1110 Truman Albuquerque, NM 87108	St. Pius	Hispanic
Baca, Ronald	509 Princeton SE Albuquerque, NM 87106	Albuquerque	Hispanic

Figure II - continued

Birdsong, Lynette	605 West 19th Clovis, NM	Clovis	Other
Castillo, Anthony	RR 1, Box 236-F Belen, NM 87002	Belen	Hispanic
Castillo, Patricia	304 Rosedale Circle Belen, NM 87002	Belen	Hispanic
Castillo, Theresa	Box 384 Folsom, NM 88419	Des Moines	Hispanic
Chavez, Richard	2412 Abbott Ave Alamogordo, NM 88310	Alamogordo	Hispanic
Dodge, Williams	102 Eighth Street Santa Rosa, NM 88435	Santa Rosa	Hispanic
Dominguez, Alvin	1008 W. Gayle Roswell, NM 88201	Roswell	Hispanic
Dominguez, John	519 Cerrillos Rd % House of Carpets Santa Fe, NM 87501	Pojoaque	Hispanic
Gallego, Consuelo	1005 Cassity Socorro, NM 87801	Socorro	Hispanic
Garcia, Charles	232 Francis Ave Raton, NM 87740	Raton	Hispanic
Garcia, Jeffrey	321 65th Street SW Albuquerque, NM 87105	West Mesa	Hispanic
Garcia, Lupe	P.O. Box 985 Anthony, NM 88021	Gadsden	Hispanic
Griego, Clara	7027 Guadalupe Tr. NW Albuquerque, NM 87107	Valley	Hispanic
Griego, Danny	316 55th St., NW Albuquerque, NM 87105	West Mesa	Hispanic
Gurule, Anthony	3103 Quincy NE Albuquerque, NM 87110	St. Pius	Hispanic
Help, Leila	Box 1594 Gallup, NM 87301	Tochatchi	Amer. Ind.
Hicks, Dwain	P.O. Box 951 Tularosa, NM 88352	Tularosa	Other
Jaramillo, Elaine	1611 Delgado Belen, NM 87002	Belen	Hispanic

Figure II - continued:

Jimmie, Miranda	Toh-la-kai Store Gallup, NM 87301	Tohatchi	Amer. In
Jones, Sharon	12321 Eastridge NE Albuquerque, NM 87112	Manzano	Other
Landavzo, Fred	Rt. 2, Box 597 Los Lunas, NM 87031	Belen	Hispanic
Melendrez, Frank	Angel's Trailer Park #36 Las Vegas, NM 87701	West Las Vegas	Hispanic
Miera, Carla	Box 134 Penasco, NM	Tularosa	Hispanic
Navarrete, Donna	11312 Nassau NE Albuquerque, NM 87111	Eldorado	Hispanic
Paz, Luis	332 E. Lewis Roswell, NM 88201	Roswell	Hispanic
Perea, Sally	Rt.6, Box 563 Los Lunas, NM 87031	Los Lunas	Hispanic
Prentice, John	Cameron Rt Tucumcari, NM 88401	Tucumari	Other
Rogers, Tracie	1604 Pennington Hobbs, NM 88240	Hobbs	Other
Romero, Roberta	313 Easton Ave Socorro, NM 87801	Socorro	Hispanic
Rowden, Kathryn	7305 Ottawa Rd. NE Albuquerque, NM 87110	Sandia	Other
Salas, Robert	6 Henrie Pl, SW Albuquerque, NM 87105	Rio Grande	Hispanic
Sanchez, David	723 La Vega Ct. SW Albuquerque, NM 87105	Rio Grande	Hispanic
Schafer, Cynthia	11431 Bar Harbor NE Albuquerque, NM 87111	Eldorado	Other
Sheppard, Dwayne	2219 Cardenas NE Albuquerque, NM 87110	Del Norte	Other
Sifre, Wayne	2717 San Isidro NW Albuquerque, NM 87104	Valley	Hispanic

Figure II - continued:

Vigil, Larry	309 Villeros St Santa Fe, NM 87501	St Michael's	Hispanic
Young, Roberta	RR #1 Tularosa, NM 88353	Tularosa	Hispanic
Gallegos, David	1728 Foothill Dr. SW Albuquerque, NM 87105	Rio Grande	Hispanic
Sandoval, Patricia	709 Union Street Las Vegas, NM 87701	West Las Vegas	Hispanic

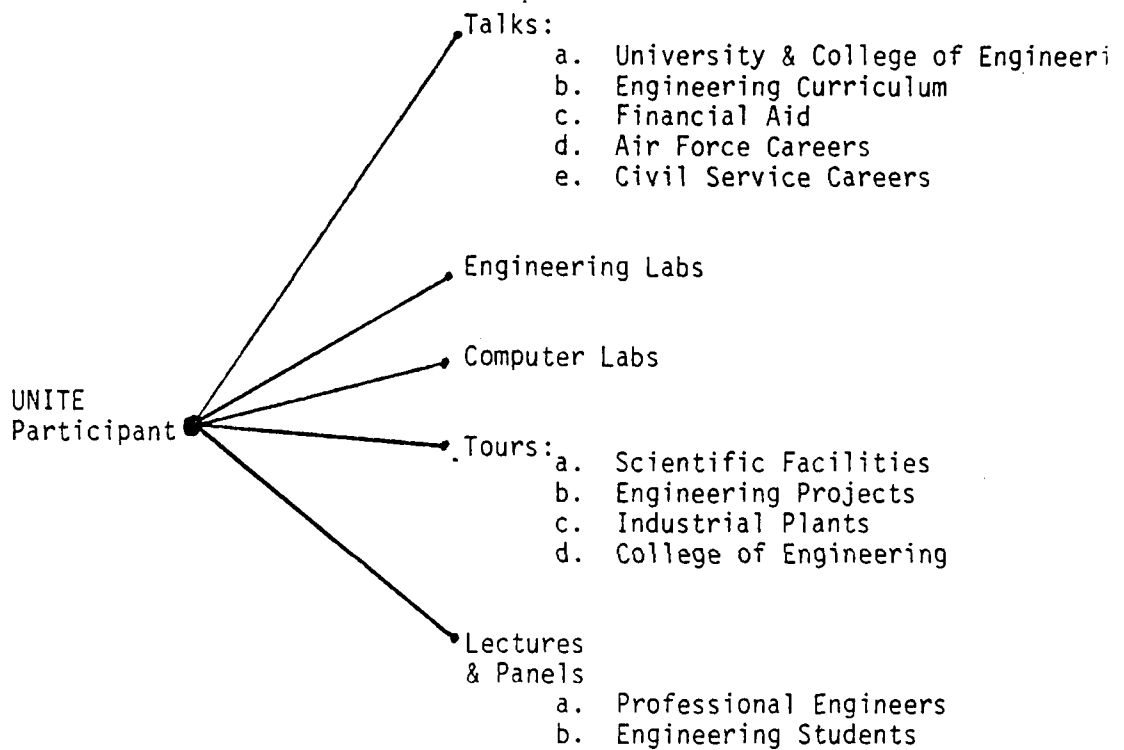
The average grade point average (GPA) of the students was better than 3.3 on a 4 point scale.

The selection was based mainly on the number of high school science and mathematics courses taken, the grades received, and geographic distribution. There was emphasis on selecting a larger number of minority and women students as participants. There were only two American Indians that applied and subsequently selected to participate. No Blacks applied.

The total applicant pool numbered 134. While the number of applicants does not appear high, it should be noted that because of the uncertainty of funding and therefore, a delay in announcing the program, UNITE had to compete for students with the following: Upward Bound at College of Santa Fe, University of Albuquerque, and Highlands University; Boys and Girls State; Civitan Club; boys and girls general camps; and summer jobs. If anything was gained from this experience, it was that an institution needs to have assurance of funding early in the second semester of the school year in order to attract students before they make commitments to other activities.

PROGRAM ACTIVITIES

The following chart gives information of the type of involvement the participants experienced.



The activities offered are shown on the following pages.
The activities that took place at the Air Force Weapons Laboratory
are given in greater detail following the general two week schedule.

SCHEDULE OF EVENTS - UNITE WORKSHOP - WEEK ONE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30	Orientation A. Welcome Dean Gross Dr. Castillo Alex Valdez	Mechanical Engr. tour Meet FEC 303	FEC 303 Tour Ideal Cement Plant	Nuclear and Chemical Engr. Tours FEC303	LASL Tour
9:30	Break	Break	Bus leaves FEC at 9:00 A.M.	Break	Bus leaves Dorm at 7:30 A.M.
9:45	B. Program Info. C. Group Pictures D. Campus Tour E. Parking Info. FEC 303	Career Opportunities In Engineering Dr. Vaughn FEC 303 Financial Aid Info. Virginia Edgar FEC 307		Engr. Students Panel "Students tell it like it is" Ruben Cervantes Tim Leonard Mary Ellen Frezquez Valerie Gonzales Theresa Isacson 636-0375	Electronics
10:45					
11:45	LUNCH	LUNCH	BOX LUNCH	LUNCH	BOX LUNCH
1:00	Introduction to Engineering Dr. Red Room 355	Bus Leaves Dorm at 12:30 P.M. AFWL Tour # 1 Richard Sanchez Lonnie A. Theye		Bus leaves Dorm at 12:45 P.M. AFWL Tour # 2 Dr. Red Richard Sanchez	
2:00	Engineering Lab Problem # 1 Dr. Red Dr. Hawkins FEC 307 Room 355		Engineering Lab Problem # 2 Dr. Red and Dr. Hawkins FEC 355		
3:00					
4:00					
5:00					
6:30	Dinner	Dinner	Dinner	Dinner	Dinner
7:00	Computer Class Alex Peralta Richard Sanchez CC - 148	Group Activity	Computer Class	Computer Class	
8:00					

SCHEDULE OF EVENTS - UNITE WORKSHOP - WEEK TWO

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30	Preview of Weeks Activities Rap Session FEC 303	EECS 8:45 A.M. Civil Engr. 9:20 A.M. Tours : FEC 303	Tour Sandia Solar Facilities Bus leaves Dorm at 8:00	Bio-Med Engineering Tour Prof. Hawkins FEC 303	Post Program Questionnaire FEC 303
9:30	BREAK	BREAK		BREAK	BREAK
9:45	"Profile on Women" Ms. Pat Luna	Preface Information Dolores Etter FEC 303		Professional Engineering Panel FEC 303	Post Program Questions and Answers FEC 303
10:45	Gov. Engr. Careers Dr. Castillo FEC 303	Co-op Information Lonnie A. Theye			Program Eval FEC 303
11:45	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1:00	Calculator Information Dr. Red FEC 307	Bus leaves Dorm at 12:45 P.M. AFWL Tour # 3 Richard Sanchez Lonnie A. Theye	Individual Computer Time CC 148	Bus Leaves Dorm at 12:45 P. M. AFWL Tour # 4 Dr. Red Richard Sanchez	Individual Counseling FEC 307
2:00	Engineering Lab Dr. Red and Dr. Hawkins Room 307 and 355		Engineering Lab Dr. Red and Dr. Hawkins Room 307 - 355		Group Activity FEC 307
3:00					
4:00					Conclusion of Program -
5:00					

A G E N D A

U N I T E 1978 P R O G R A M

A I R F O R C E W E A P O N S L A B O R A T O R Y , K A F B

12 July 1978

Conference Room 3

Building 414

1300 - 1315

WELCOME

COL J. RICH
COMMANDER, AFWL

ADVANCED RADIATION TECHNOLOGY OFFICE

LT COL DANA BRABSON

1315 - 1400

MOVIE - INTRODUCTION TO LASERS

1400 - 1600

TOUR OF LASER FACILITIES AND DEMONSTRATIONS

14 July 1978

Conference, Room 213

Building, 914

1300 - 1430

MINORITIES IN SCIENCE AND ENGINEERING

DR. HENRY MONTIETH
SANDIA CORPORATION

ELECTRONICS DIVISION
MR. WILLIAM PRATHER

1430 - 1500

THE MINI COMPUTER AND DEMONSTRATIONS

MR. RON WILLIAMS

1500 - 1700

TOUR OF EMP FACILITIES

MAJ S. A. RICHES

19 July 1977

Conference Room Bldg 423

NUCLEAR SYSTEMS DIVISION

LT MARSHA THORNTON

1300 - 1430 DISCUSSIONS AND PRESENTATIONS

CIVILIAN PERSONNEL

SALLY SANCHEZ

1430 - 1500 ENGINEERING RECRUITING

TECHNOLOGY DIVISION, BUILDING 322

LT COL JIM HAVEY

1500 - 1630 HIGH ENERGY PHYSICS AIRMAN CAROLYN DELOACH

21 July 1977

Conference Room 3, Bldg 414

CIVIL ENGINEERING RESEARCH DIVISION

LT COL JOEL BRADSHAW

1300 - 1400 HIGH EXPLOSIVE TESTING

COMPUTATIONAL DIVISION

MR. GENE OMODA

1400 - 1630 TOUR AND DEMONSTRATIONS OF COMPUTATIONAL FACILITIES

PROGRAM EVALUATION

The following are interpretations of questionnaire data together with other information gathered from conversations with the participants.

A. PreProgram

A large number of the participants (82%) found out about UNITE through their teachers and counselors. Most of the other students indicated that they found out about the program through their friends that had participated in UNITE '76. Again, as last year, the least effective way of advertising UNITE was through the principals and general school announcements.

Most of the students (98%) indicated at the beginning of the program that they had plans to attend college. The 2% who indicated no college plans stated that they were looking at joining the service. Of those 98% that intended to go to college, 70% indicated their major area of study would be engineering, 15% indicated sciences, and the others were undecided. Of the male participants, 52% indicated engineering as a major area of study compared to 35% of the females. Both figures showed an increase over last year. Mathematics was taken by all students. Algebra 1, Geometry and Algebra 2 were most common courses taken, followed by Trigonometry and Analysis. Trigonometry and Analysis were mainly taken by students coming from large (1000+ students) high schools. In sciences, Biology and Chemistry were the most common courses that had been taken. Physics was taken mainly by students again from the large high schools. Physics, trigonometry and analysis appear to be courses generally not offered in the small high schools.

B. Post-Program Evaluation

The statistics again as in UNITE '76 changed significantly at the conclusion of the summer program. All participants indicated an intent to go to college. The number who chose engineering after the program changed to 94% of all of the participants. Civil and Electrical Engineering were the slight favorites in area of interest. Students were nearly equally divided in degree of interest in chemical, mechanical and computer science. The few who did not choose engineering indicated that they would have chosen engineering had they not already chosen education, music, nursing and pharmacy.

Of those who chose engineering, 82% felt that the activities of the two weeks had influenced or strengthened their choice. The others indicated that they would have chosen engineering regardless of the program.

Sixty-seven percent of the students felt that the length of the program was about right, while the rest felt it was too short. Most of the students (97%) like the total program.

The participants felt that the most outstanding activity was the tours. Next was the opportunity to listen and mix with engineering students. The computer labs were well liked by the students but they expressed frustration because there was so much to learn and so little time to do it in.

The students felt that the weakest part was the lack of an organized week-end activity and no dance after the banquet. When the students were asked if any part of the program should be omitted, 75% stated "No", and 20% indicated "Yes". Those that said "Yes", wanted to see evening classes dropped so that they could have more personal time.

General comments were invited about UNITE. The feeling was that they had all enjoyed the program but felt that a 10 hour day was too long. The students felt the program was well planned and that they had gotten a lot out of it

BUDGET

The budget expenditures for the UNITE '77 program was prepared and mailed by the University of New Mexico Office of Contracts and Grants. Any questions with regards to the expenditures should be referred to Dan Marcum of that office.

CONCLUSIONS AND RECOMMENDATIONS

The UNITE '77 program was another successful program by the College of Engineering. The indication is that this non-traditional program is helping to increase the number of minority, women, and other engineering students. Programs such as UNITE should be continued.

The format used for the 1977 program was somewhat similar to the one used in 1976. The main change was that talks by "one" person were kept to a minimum.

While many students wanted night classes dropped, as was the comment in UNITE '76, the program staff still feels that because of the great number of activities to be covered, the evening classes should be continued. Having the computer class at night worked out to be a better night activity. It is highly recommended that this be continued.

Funding for the program should be made available well in advance (at least 5 months) of the planned time for the program. This year's program which received authorization notice of funding only four days before the program was to start was cutting it very short. The program staff was getting ready to contact all of the invited participants and inform them that the UNITE '77 had not been funded.

The program director should receive extra compensation equivalent to seven days of work. In order to run an efficient program from which the students receive maximum benefit requires that there be someone that the students can closely associate with - day, night and weekend.

UNITE '76 FOLLOW-UP

The UNITE '76 Follow-up is enclosed and is listed as
Appendix A.

1977 Follow-up study on the
1976

SUMMER RESEARCH OF FACTORS INFLUENCING HIGH
SCHOOL STUDENT'S CHOICE OF CAREERS IN DEFENSE
RELATED ENGINEERING

TITLE: Uninitiated Introduction To Engineering

U N I T E

Funded by Grant # AFOSR-76-3090 from the
Air Force Office of Scientific Research

College of Engineering
The University of New Mexico
Albuquerque, New Mexico 87131
Telephone: 505/277-5831

December, 1977

Report by: Richard S. Sanchez

UNITE '76 Director

TABLE OF CONTENTS

Abstract	1
Follow-up Study.	2
Sample Questionnaire & Statistics	4
Letter	6

A B S T R A C T

The UNinitiated Introduction To Engineering (UNITE) 1976 program had 41 participants (21 male and 20 female). The ethnic breakdown is shown in the table below.

<u>Ethnicity</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Hispanic (Chicano) . . .	17 . . .	12 . . .	29
American Indian	2 . . .	2 . . .	4
Blacks	0 . . .	2 . . .	2
Other	2 . . .	4 . . .	6
<u>Total</u>	<u>21</u>	<u>20</u>	<u>41</u>

Eighty-two percent of those who have applied for College indicate that they are enrolling in engineering; of those who have not yet applied all but me intend to enroll in engineering.

The overall results closely parallel the 1977 follow-up study on the 1976 MITE participants nationwide. This indicates that we are getting the same type of results as a program which has been in existence for several years.

FOLLOW-UP Study on
UNITE '76 Program

This report on the "1976 Summer Research of Factors influencing High School Students' Choice of Careers in Defense Related Engineering," titled: Uninitiated Introduction to Engineering (UNITE), is the first on this program. Therefore, there is no possibility of comparison as yet. However, when this program is compared to the results of the Minority Introduction to Engineering program (MITE), the UNITE '76 program results somewhat are paralleled. The tabulated results are shown on page 4 of this report (Sample Questionnaire).

The survey was conducted during May and September, 1977 almost a year after the UNITE '76 program was held. The participants were just finishing their senior in high school and had formed some future academic plans.

UNITE '76 was conducted on the University of New Mexico campus. It was managed by the College of Engineering Special Programs Office. The total attendance was 41. UNITE '76 was made up of 20 females and 21 males.

Hispanic (Chicano) participants totaled 71%, Black 5%, American Indian 10%, and other 14%. The questionnaire was designed nearly like the one used by MITE so that anyone desiring to make some comparison could. A total of 93% of the UNITE '76

participants responded compared to 51% for MITE '76.

Eighty-nine percent of the respondents applied for admission to college compared to 74% for MITE. Of those who have not, all but one student indicated that they would apply later. The one student that indicated that he would not apply will seek full time employment.

Of those that applied to college, 82% indicated engineering as their field of choice. Eighty-two percent of the males and eight-two percent of the female indicated engineering as their choice of study area. More females than males indicated that UNITE had definitely influenced them in pursuing engineering studies

Responses to question number 4 (Did the program help to determine your future career goals?) indicate that the program helped 87 of the participants determine their future career goals. Thirteen percent had decided what they were going to study both prior to and maintained the same thought after the program. Of those that had decided against studying engineering, 4 wanted to study business, one medicine (biology), and the other music.

percent changed their senior year program following UNITE '76. percent wanted to change their program but could not. Many of the respondents indicated that they changed or wanted to change their program because of what they learned at UNITE. All of the changes were for more math and science courses.

The statistics are quite positive overall and indicate that the program is accomplishing what it was intended to do and that is, "influence high school students into engineering studies. "I am reminded of a comment made by a speaker at the 1977 MIT Workshop on Retention of Minorities in Engineering studies, "Net loss of students in engineering studies is due to a lack of recruitment and motivation." The statistics indicate that UNITE is a successful program, for motivating students to pursue engineering studies. It would be interesting to find out how many participants will actually graduate with an engineering degree.

Total UNITE '76
Participants 41

PLEASE RETURN TO:

Richard S. Sanchez, UNITE, Director
University of New Mexico
College of Engineering
Albuquerque, NM 87131

Participant's Name: Responses: 38 Phone No.

Address Male: 19 Female: 19

Town or City

Name of High School(s) attended during your senior year

Please answer and return this questionnaire as soon as possible.
Your answers and comments will help to determine the impact
UNITE had on students and also for obtaining money for other
future programs. You may use the reverse side for additional
comments. M 17 F 17 / M 2 F 2

1. Have you applied for admission to college? Yes 34 No 4
If yes, where? UNM 19, NMSU 7, NMT 3, other NM Sch 3, out of Sta
Major field? Engr. 28, Bus 4, Medicine 1, Music 1
2. If you have not applied for admission to college, are you
considering applying at a later date? Yes 3 No 1
If yes, where and major field? Engr. 3,
If no, why not? Work 1
3. Are you planning on going into engineering or an engineering
related field? (Science, Math etc.). Yes No
Which related field? - OMITED on Statistical Count -
4. Did the program help to determine your future career goals?
Yes 33 No 5 Please explain:

Yes: F 18, M 15 No: F 1, M 4

5. Did you change your senior year program of studies following the two-week program? Yes 6 No 32 If yes what changes did you make? _____

Generally Social Studies and Business to math and science

Why? _____

6. Did you want to change your program but find that you were unable to do so? Yes 5 No 29 If yes, why were you unable to change your program? No response 4

Courses not offered

7. Did you take a mathematics course during your senior year? Yes 29 No 5 If yes, which courses? _____

No response 4

If no, why not? No higher math offered

8. Did you take a science course during your senior year? Yes 27 No 7 If yes, which course? _____

No response 4

If no, why not? No other Science offered

Did you discuss the program with the following:

- | | | | | | |
|------------------|---------------|--------------|----------------|---------------|-------------|
| 9. Principals | Yes <u>9</u> | No <u>29</u> | 13. Counselors | Yes <u>37</u> | No <u>1</u> |
| 10. Teachers | Yes <u>37</u> | No <u>1</u> | 14. Friends | Yes <u>38</u> | No _____ |
| 11. Parents | Yes <u>38</u> | No _____ | 15. Relatives | Yes <u>38</u> | No _____ |
| 12. Other Adults | Yes <u>38</u> | No _____ | | | |

Thank you for taking time to fill out the questionnaire.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30	Orientation A. Welcome Dean Gross Dr. Castillo Alex Valdez	Mechanical Engr. tour Meet FEC 303	FEC 303 Tour Ideal Cement Plant	Nuclear and Chemical Engr. Tours FEC303	LAST Tour Bus leaves Dorm at 7:30 A.M. Electronics
9:30	Break	Break	Bus leaves FEC at 9:00 A.M.	Break Engr. Students Panel "Students tell it like it is"	
9:45	B. Program Info. C. Group Pictures D. Campus Tour E. Parking Info.	Career Opportunities In Engineering		Ruben Cervantes Tim Leonard Mary Ellen Frezquez Valerie Gonzales TUCRCA 15MKSOK 836-0375	
10:45	FEC 303	Dr. Vaughn FEC 303 Financial Aid Info. Virginia Edgar FEC 307			
11:45	LUNCH	LUNCH	BOX LUNCH	LUNCH	BOX LUNCH
1:00	Introduction to Engineering Dr. Red Room 355	Bus Leaves Dorm at 12:30 P.M.		Bus leaves Dorm at 12:45 P.M.	
2:00	Engineering Lab Problem # 1 Dr. Red Dr. Hawkins FEC 307 Room 355	AFWL Tour # 1 Richard Sanchez Lonnie A. Theye	Engineering Lab Problem # 2 Dr. Red and Dr. Hawkins FEC 355	AFWL Tour # 2 Dr. Red Richard Sanchez	
3:00					
4:00					
5:00					
6:30	Dinner	Dinner	Dinner	Dinner	Dinner
7:00	Computer Class Alex Peralta Richard Sanchez CC - 148	Group Activity	Computer Class	Computer Class	
8:00					

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30	Preview of Weeks Activities Rap Session FEC 303	EECS 8:45 A.M. Civil Engr. 9:20 A.M. Tours : FEC 303	Tour Sandia Solar Facilities Bus leaves Dorm at 8:00	Bio-Med Engineering Tour Prof. Hawkins FEC 303	Post Program Questionaire FEC 303
9:30	BREAK	BREAK		BREAK	BREAK
10:45	"Profile on Women" Ms. Pat Luna Gov. Engr. Careers Dr. Castillo FEC 303	Preface Information Dolores Etter FEC 303 Co-op Information Lonnie A. Theye		Professional Engineering Panel FEC 303	Post Program Questions and Answers FEC 303 Program-Eval. FEC 303
11:45	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1:00	Calculator Information Dr. Red FEC 307	Bus leaves Dorm at 12:45 P.M. AFWL Tour # 3	Individual Computer Time CC 148	Bus Leaves Dorm at 12:45 P. M. AFWL Tour # 4	Individual Counseling FEC 307
2:00	Engineering Lab Dr. Red and Dr. Hawkins Room 307 and 355	Richard Sanchez Lonnie A. Theye	Engineering Lab Dr. Red and Dr. Hawkins Room 307 - 355	Dr. Red Richard Sanchez	Group Activity FEC 307
3:00					
4:00					
5:00					Conclusion of Program - Return Home
6:30	Dinner	Dinner	Dinner	No Dinner at La Posada. Banquet at K - Base E Officers Club Dr. Castillo Bus leaves at 6:15	
8:00	Computer Class CC 148	Group Activity Mixer	Computer Class CC 148		